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Address.

ORTHOPEDIC PROBLEMS IN WAR. A LECTURE AT THE ARMY SANITARY SCHOOL, AMERICAN EXPEDITIONARY FORCES.

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THAT which I have to talk to you about this afternoon has to do, of course, primarily with that which the Division of Orthopedic Surgery has to offer the Army Medical Corps; but I hope that apart from the military aspect of the work, some of the principles that have been worked out will be of interest to you because of the advantage which these principles are bound to exert upon civil practice. It seems to me that one of the most obvious things in connection with this war experience is that we are never going back to the same conditions in our civil practice that we have been willing to follow before. Certainly the treatment of the industrial accidents at home is never going to be on the same plan that it was before, and if I am not mistaken the experience that we have had over here means that the services in our civil hospitals will have to be pretty much revised. The fundamental reason for this is that the one thing that all are interested in—the

Army, the public, and the wounded men—is: "What can he do with himself when he is through with that which the Medical Corps can do for him?" Formerly, of course, in the army organization, the policy was simply to get the man out of service as soon as possible after he had been injured, but with the immense number of casualties which the British and the French armies had—the German Army also—it became absolutely necessary for them to think in terms not just of the immediate treatment of the wound but such treatment as would insure the seriously wounded man being the least burden to the nation and also to insure to the Army the return of the greatest possible number of men to the ranks for further service. It would seem absolutely impossible for the British and the French armies to have been maintained at their proper strength—the same thing is true of the German Army—had it not been for the work of the medical corps, which was made responsible for getting these men as nearly perfectly well as was possible so to do. In the British Army it was demonstrated that nearly 75 per cent. of all the wounded men were returned to the line or returned to the Army for duty after their treatment had been completed. That made it necessary to plan treatment and care entirely different from the ordinary care which the armies had previously considered

necessary; and in the British armies, after two years of experience with a great many non-effectives, the nation turned to Sir Robert Jones, the orthopedic surgeon at Liverpool, and gave to him practically the whole responsibility for trying to assist the seriously wounded in the hope that he could do something in the way of returning them to duty. Entirely apart from what it meant to the man himself, the British nation needed man power and it turned to Sir Robert Jones to work out the problem. He took it up with the result that nearly 75 per cent. of the wounded men were returned to the service.

Now when war was finally declared against Germany by our Government, the first two requests that came to us for help were that our nation send six base hospitals to help the British, and twenty orthopedic surgeons to help Sir Robert Jones. These were the two greatest needs which the British Empire had at that time. It was my privilege to be asked to get together this group of orthopedic surgeons and go over with them, study the situation, and then plan the organization for our own army. Twenty officers sailed within three weeks of the time the request was received and were assigned upon arrival to British orthopedic centers. This group of men has been the nucleus around which practically all the structure of the orthopedic organization which we are using in the A. E. F. at the present time has been built. The officers were picked in the first place because of unusual fitness, and the training which was given them in the British orthopedic centers has enabled them to offer to the American A. E. F. most useful service.

As you will see as we go on, the work of orthopedic surgery in time of war is of very different magnitude from that which existed in civil life. In civil life the number of cases that are of an orthopedic nature is relatively small, while in the army, especially in combat, the number is very, very large indeed.

The work of the Division of Orthopedics divides itself quite clearly into two parts: One which has to do with getting the men fit for combat or full military duty, and the other taking care of the men and restoring function after they have been wounded. These are two perfectly distinct parts of the work.

In the first place (that which has to do with the pre-combat or training period) the problem consists in getting men physically fit,

so that the human machine, which if used rightly, will stand severe strain, is ready for that strain when it is applied. In a nation that has developed as has ours, with its educational system based practically entirely upon the intellectual training and paying no attention whatever—except in isolated cases—to the physical development or physical education of our people, the natural result is that when war was declared there were in our country a large number of young men who were physically far from being fit for the physical effort that would be required for military duty. As you probably know, if you remember the figures, in the first draft that was made for the National Army, 19 per cent. of all the men that were examined were considered unfit for service because of flat feet alone. This is just one physical defect. Nineteen per cent.—nearly a fifth of the total of our young manhood! And of course, beside this, there were a lot of other conditions of physical weakness.

The same conditions were shown to exist in the first divisions with which we were obliged to work in the winter of 1917. The first units that were sent over here—the 1st, 2nd, 26th, and 42nd Divisions—were made up either of regulars or National Guardsmen—and of course the regulars were simply skeleton units of regiments with the personnel almost all recent volunteers, some of whom had not had a gun in their hands until they were put on ship. They were naturally not trained men: they were fresh volunteers, and with those four divisions the men were in such condition with so much difficulty with feet and backs that unless there had been some method worked out for handling the conditions, the wastage would have been very large. The number that would have been scrapped because of feet and back troubles, would have been such a large per cent. that it would have been very difficult to maintain the units. That led to a study of the problem and to a decision upon a plan that was applicable—not simply to an individual but applicable to groups of men, since the need was for hundreds and not for fives and tens. It became quite obvious as the matter was studied that the flat feet or weak backs which so many of our young men have is nothing but a question of the use of the body; the flat feet or local trouble being only result and not the primary condition. If you will study the anatomy of the human body

you will see that if a person stands fully erect the muscles of the feet and lower leg are in such position of physiological tension that the bones of the feet are held in position, and you need have no anxiety or concern regarding weak or flat feet. Flat feet are frequently due to the way the body is used, and the treatment consists in showing the man the proper way to use his body. If you view it that way your problem is a simple one. A man with flat feet should rarely be on sick report: he should not be in a hospital because of that, except for temporary acute strain. It is a question of training and not of medicine, and the moment you put it on this basis you relieve your regimental surgeon of an enormous amount of work which otherwise results at "sick call." You put the man where he should be; you make him understand that it is his own fault; that if he will only do certain things he will get over it. If he has trouble with his feet he should stand up straighter, and you practically eliminate the weak-footed, flat-footed men that have been such a nuisance in the army up to the present time.

The problem was presented in such magnitude last winter that it became necessary to do something—not for individuals, but for groups—and after working the thing over it became obvious that the best thing to do was to take these men with weak feet and badly poised bodies—the type that we have seen so much at home, that has prided itself upon its slouched carriage—and properly train them. The human body was never made to be used in this drooped manner and when so used, weakness will inevitably develop under strain.

The problem was finally worked out as follows: The men with weak feet or weak backs or with badly poised bodies, were assigned to a special organization. They were segregated, and a military camp was started to see what could be done with them. To give you an idea of the magnitude of the work in these early units—there was one 28-hour period of military maneuvers last winter with one battalion, and after the maneuvers were over there were 138 men sent to the hospital out of that battalion, with trouble with their feet. That was out of one battalion alone, and it was not a whole battalion at that; 138 men after only 28 hours of maneuvering, and they were not hard maneuvers and it was evident that if our army was going to be made up so much of that type of man-

hood there was not much question as to what the end would be. These men were put in a special training organization. They were there told the reason why the human body should be used erect and what happens when a man is standing up, with his body fully erect, with the chin pulled in, and with the weight on the balls of the feet. In such position one naturally will get the spring of the arch of the feet and the muscles will be in such physiologic contraction that they will hold the bones together. It is the position of ease, not of strain, once you have learned it. It was explained to the men and they were told over and over again. They were made to realize that the way they stood was the cause of the trouble with their feet and that the cure was to get the proper carriage of a soldier. They were told to pull in their chins and it was explained to them that one cannot "suck up his guts"—which the drill sergeant is always talking about—unless he pulls his chin in.

You should all realize if you hold your head forward you cannot pull up the diaphragm; on the other hand, that you cannot pull the chin in without pulling the diaphragm up (indicating) since the suspensory ligament of the diaphragm is attached to the base of the neck at the side of the low cervical spine. This being the case, since yawning or sighing are efforts to raise the diaphragm and relieve the abdominal viscera, it is almost impossible to do either without drawing in the chin. It is difficult to yawn with your head forward; it is difficult to sigh with your head forward. This is all explained to the men as a simple piece of mechanics, in order to breathe rightly, and to get the digestion to work properly. A short lecture was prepared—talk it had better be called: talk which the men could understand—and the orthopedic surgeons of the divisions gave that to all of the men of the divisions and then looked the men over, those having trouble with their feet or backs being put by themselves. The special training was largely military in character—manual of arms, squad drill, bayonet drill, etc., but always from the erect position. The periods of any drill were made short but with constant emphasis on the form: short, snappy periods of marching or other duty with quick recovery until the action became automatic.

If there was much difficulty so that real flat foot existed with marked weakness, the heels of the shoes were raised on the inside so that

the weight was more properly borne. With this position the gait will be better and the man is made to realize that in walking he should walk with the feet nearly straight ahead. With the cases of extreme flat feet it became, of course, a question of possible treatment. What could be done to save the man for the army? Of course, with actual flat feet the man couldn't be depended upon for a long hike. Therefore, he had to have some special treatment, and the treatment that was worked out had to conform to military needs and possibilities. Foot plates were out of the question, and while in civil life these may be necessary because people will not pay attention to instruction, having to do with curing the weakness with the army it was different. We had that large group under authority where we could say, "Do such and such things." And the result was that after a reasonable period under this special training a large number of these men were returned to duty without flat feet and fit for whatever service was required of them. Where special support was needed temporarily a leather strap worn as a figure of eight about the ankle and under the instep has met the requirements and not interfered with the development of the muscles. This can be worn inside the shoe without chaffing. (Demonstrating).

Now, of course, when the weight is on the foot and the foot is relaxed, the foot sags to the inside and the cuboid will be pushed to the outside. The cuboid should be under the tarsal bones and the weight should come on this (indicating) and with the cuboid in place you rarely get flat feet. On the other hand, if the foot spreads that way (showing) as it does when the arch drops, the cuboid is pushed out to the side and you not only have flat feet but you will never cure the condition as long as the cuboid is displaced. If the cuboid is out of place you will always have the foot wrong mechanically. To correct this we simply made a strap that would go round the foot over the stocking (Fig. 1). This is an ordinary piece of goat skin which was the only thing we could get at that time, but they have been made of pretty much everything, and many thousands have been used. The strap comes directly over the cuboid, just behind the fifth metatarsal, and then under the foot and around the ankle. The buckle should lie directly behind the inner malleolus, where there is a natural depression. A man can march all day with such a device and



FIG. 1.—Figure-of-eight ankle strap.

every time he steps he steps into a stirrup, which tends still farther to correct the position. It does not interfere with the muscle action but it simply gives the needed support and little by little the foot comes back to proper shape and the condition of weak feet or flat feet is corrected. This simple strap, which is called the figure eight strap, is extremely useful for flat feet, both in civil and military practice, since it acts in a constantly corrective manner. The manufacture of the straps has been carried on by men who were not of combat fitness.

There is another type of foot difficulty that is very common and the result of the type of shoe that has been worn so much with a pointed toe and especially with a short shoe. This type of foot is spread across the front and affects the big joints and causes more or less of crumpled toes. These men always get sore joints; they have to wear a shoe that is much too wide and they also have calluses on the balls of the feet—a very troublesome foot and the source of a great deal of difficulty to the man and a nuisance to the regimental surgeon. This represents, when you analyze it, simply a spreading of the anterior part of the foot, a stretching of the ligaments that hold the foot together; and all you need is something to hold the foot together that will not interfere with the use of the foot for marching, such as these little straps (Fig. 2). A strap of this kind applied around



FIG. 2.—Anterior arch strap.

the front of the foot, just behind the joints, with the buckle placed in the depression which there is just back of the head of the fourth metatarsal, will hold the foot together with no pressure over the joints. The support comes directly back of the joints, and as the foot is held together the heads of the three middle metatarsal bones will be raised and the common painful calluses relieved. You cannot hold the foot together without raising these bones and the troublesome calluses will disappear in a short time without local treatment. So with these two straps the figure of eight for the long arch, and the short one for the transverse arch, you have two simple measures which make it possible really to cure conditions—not only relieve but really cure conditions which have represented one of the most troublesome problems in the army previous to this time. When you realize that 19 per cent. of the first draft army was exempted from service because of that, I think you will realize what it means.

The other condition which you find commonly in the period of training or preparation is weak back—the fellow with the crick in the back, backache, and lumbago and all that sort of thing. The low back, together with the feet, are the two naturally weak parts of the body. The spine and pelvis are held together by muscles and ligaments. The bones in the foot are held together by muscles and ligaments. Therefore, if the muscles of the body are not rightly used or are overtired, it is an inevitable thing that you will have strain and weakness with later joint weakness; not that you may have it; it is inevitable. Just the same as if you use the body wrongly you will have trouble with the feet, so if the trunk is used wrongly you will have trouble with the back. One is just so much a mechanical certainty as the other. Now if a person stands drooped as I am standing now (demonstration), the abdominal muscles are entirely out of commission. The abdominal wall is entirely relaxed. If I am struck even a light blow on the abdomen in this condition it will knock me out because there is no muscular protection. In this position now the back or spinal muscles are holding the entire support of the body. The muscles in that position are under strain and no muscle can stand strain for more than a certain length of time before relaxing. If you stand drooped, as I am standing now, the muscles of the back are under strain; in a short time they become tired and you change

to the other side; the muscles getting more and more tired, until the strain is put upon the ligaments, and no ligaments are made that will not stretch after a time if undue strain is put upon them. Then you begin to have aching in the back, the back being tired, and difficulty in sleeping because of backache, and extreme weariness in marching.

You will always have a large number of men in any military organization with these weak backs and weak feet. These are the two most common things. If you can eliminate them you needn't worry much about the other conditions. Now the same things that apply to foot conditions apply to back conditions. The men with weak backs were sent into the training organizations the same as men with weak feet, and it was explained that the trouble with the back was due to the way the body was used. If you stand erect, the muscles and ligaments of the back are all in normal physiological use. Every movement is made from the correct position, and that position can be maintained for an indefinite time almost free from weariness. Once that is gotten into the mind of a man and he realizes it, he comes in from his hike much less tired than he was before and it doesn't take long before he carries himself that way naturally. Now remember that the question of posture is just as easy to train a man to as it is to train a man in any other thing that requires physical effort. The shaping of letters as we train the children is just a question of muscle training, so also is the manual of arms, and after a time both become automatic. It is the same with the use of the body as a whole. Once a man has been well trained he uses his body automatically, and he becomes conscious of doing it otherwise rather than conscious of doing it properly. And one of the great things this army of ours is going to do for our nation is to put back into our population a large number of strong, healthy men, well poised, vigorous specimens, who are going to be the fathers of the next generation. One of the best things that is coming out of the war is that our manhood is going back to the States and our men back to their homes, strong healthy specimens. There is no question about that at all, and their children will be strong and well, and we won't have so many poor unhealthy children born into the world as we have had in the past, nor the constant struggle to keep them here.

When you realize the way it has been handled at home you will see many good things coming out of all this. You saw in the paper the other day that, among the units first to be demobilized were the development battalions. Orders said no man suffering from flat feet would be exempted from the service in the army; they should be taken in and trained and not scrapped, and given a chance, and that idea developed at home into so-called developmental battalions. Now, among the first units to be demobilized are these developmental battalions, and in them at that time there were 93,000 men. In other words, among our camps at home we have 93,000 men who have come in the last draft and put in there because of weakness. These men, while perhaps not yet perfect, will be much better for the training and they have had much explained that will be helpful. It has been made clear that each can be just as good as any man if he goes at the thing rightly. Each can be a strong, fine physical specimen of mankind just like any of his mates.

Now just one word in illustration to make you realize the thing I have just said, that once a man has learned to use his body rightly he will never forget it. A number of years ago, a broken-down physical wreck of a man was under my charge at one of the hospitals; he was all shot to pieces, but after a couple of years the man was well enough for duty, and he was given a job in our office as doorman and porter, and there he worked for a good many years. One day a British Lieutenant-General, an old-time British war-horse type of general, came to the office by appointment and this man opened the door and let the General pass on, indicating to him the room in which he could find me. That was the only intercourse these two men had. The General came into my office and said, "Where did you get that fellow?" I, not knowing what he meant at first, he added, "That fellow at the door," and then I told him hurriedly what I knew about him, and he said: "I don't mean that. He has been in our army." I said that I didn't think so; that he had been in our country 13 years, but the General scoffed and said, "He has been in our army," and nothing I could say changed his opinion. When he went out John opened the door for the General and when he passed him he said, "What regiment were you in?" John snapped to attention, saluted, and told him. The next day when I asked the General how he picked the

man out, he looked at me with an expression of infinite pity. "Why, once a man has been trained in our army he never loses it." The only interest he had was the regiment in which he had been trained. He had been a cripple a long time but the General saw something that meant only one thing to him and that was that he had been in the British Army, and the only thing that interested him was that regiment. Now this war has given us the opportunity to get our men trained so they will not have lame backs and flat feet, and when the country needs them we won't have to scrap 20 per cent. right off, or especially train them before we can make them fit for combat.

President Lowell, the other day, made the remark, according to the daily press, that if our nation does not see as a result of this war experience the need of putting into our educational system that which has to do with proper physical training of the body as well as intellectual training, we have missed a very great opportunity. When that sort of thing is realized it means that we are going to have a stronger, finer looking lot of men to depend upon for every detail in our national and private life.

Now it hardly needs any further argument than this. A man going over the top doesn't want to be slouchy and relaxed; he wants to be up on his toes ready to jump, run, or hide, or hit; a man isn't at his best if he can't jump or run quickly, and he can't do it if he isn't well trained. He wants to be up erect so that he can hit a blow that has the full power of his body behind him when he needs a strike.

On the strength of this a great many men have been made well and saved for the A. E. F. During the winter of 1917, when there was relatively small call for our men for combat, it was possible to keep the men long enough at the special training to make Class A men of them. In the last four months, however, it has been necessary to change the policy and make a compromise, due to the military necessity. Since last July there has been such a demand for men of military units, and there has been such a constant stream of men going through that it has been impossible to keep the men in training battalions long enough to make them fully well. All that could be done was to fix these men up as fully as possible and assign them for Class C duty. They could not be made well because of lack of time. The work

consisted in fixing their shoes, giving them straps, giving them a few talks and as much training as the time allowed. Since the army began its active offensive in July, which, of course, has been kept up ever since, great numbers of C men have been used, and A men, who would otherwise be employed, could be released to fill up the combat units. For instance, in a very short period, 1,200 Class C men from the training organization were sent at one time in one group to staff the hospitals in the Toul area, men who were not equal to the long strains of combat. One thousand men went for prison guard duty; another thousand for extra personnel duty around hospitals; a lot of chauffeurs and motor mechanics have come from the training camp, men who have had suitable technical training but whose physique was not up to combat. So it has been necessary to use the camp, not as a place to make men really fit, but to show them how to get fit, and to serve as a sorting station. The men who were used for the special splint teams, were taken from the training battalions—men not equal to combat but perfectly satisfactory for the kind of work they were given to do. The average man you see isn't yellow; he isn't a quitter; he wants to do the thing, but physically he may not have the stuff in him. The minute you put the thing up to the man and make him realize that it is a weakness which he can correct and of which he ought to be ashamed as much as any other weakness, the man is usually saved.

PART II.

There is a remark which should have gone with the talk just completed. I have just stated to Major Boothby a remark made to me a few days ago by a man who has studied the situation quite fully: that while we have lost a good many men over here we have undoubtedly caused a much larger number than those killed by developing and making them physically well men, who would otherwise have been lost in a reasonable period of time. I think that a very fair statement.

When it comes to the question of combat and injuries of combat, certain principles have been worked out for taking care of the problem with reference not only to the immediate treatment but with reference to the ultimate condition of the man. As the subject was studied in the very beginning of our activities it was evident that the remark of the Director-General of Med-

ical Services of the British Service, "Remember that your reconstruction work begins in the trenches," was true, and to meet this the following organization was planned.

In the first place, in order to meet the needs of an army that was being planned for us, it was necessary to have some standard system of splinting, or standard types of splints that would be used by everyone. You can see it would be hopeless and cause great confusion if Smith, Green, Brown, and Jones had their own special splints. The supply department, in the first place, would have found it impossible to meet the demand and the wounded man would have suffered; because, as he was moved from hospital to hospital and the splints changed every time, it would not only be harmful for him but he would soon get the idea that nobody knew anything about it. In June, 1917, a conference was held in one of our hospitals then serving with the British, and recommendations were made for standard splints to be provided in our army, and in October the "Splint Manual" was issued. In order to make it possible to meet the need it was necessary to have splints that were the simplest possible for construction; they had to be made over here and only certain materials were available. It was necessary to have splints that could be made by ordinary labor and that could be made by the thousands and hundreds of thousands. They must also be easy to transport as well as simple to apply. Of course in this proposition we had the benefit of the immense experience of the British and the French, and seven types of splints were finally decided upon that were to meet practically every need that would come into the army. When you see in the museums the number of patterns of splints that have been devised and realize that it has been reduced to seven, you appreciate what an immense saving that has been to the army, and what a great advantage that has been, not only to the wounded men, but the cause of medicine in general. A principle is involved in this that should be reflected into civil life, which is, that there cannot be six or more different ways of doing the same thing that are equally good. In civil life there have been any number of ways of doing things and each man thought his way was the best. But here, with the help of the experience of the British and French, simple sufficient standards were decided as being the best.

The principles of the splints come down to

two very simple ones. One is that of fixation of the wounded part so that undue harm will not be put upon the tissues in handling, and the other that of traction to overcome the pull of the muscles which have been bruised and are thrown into a state of spasm. So that the two principles of fixation and traction were the basis of the desired treatment and the splints which have been adopted not only meet the requirements, but are much the same as those used by the British organization. For the injuries of the leg the Thomas splint has been adopted, and this, without question, has saved more lives than any other one appliance that has ever been devised (Fig. 3). The splint is

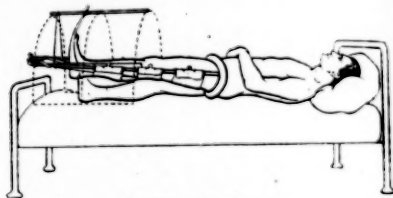


FIG. 3.—Thomas leg splint.

adaptable for almost all injuries of the leg, from the hip joint down—except injuries of the foot; you have to have something else for that. It consists, as you see, of the ring and two rods. The pressure of the ring should be on the tuberosity of the ischium, and the extension is attached to the bottom of the splint. The British have used this splint not only for the treatment of fractures in hospitals, but they have used this in the transport of patients from the field. For our own organization we have adopted for the field splint a different pattern because it is easier to apply and meets the needs almost as well. This is a pattern of splint devised by Colonel Keller (Fig. 4), of the Medi-

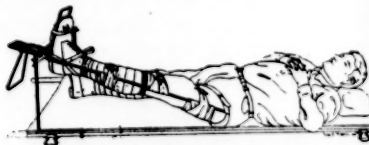


FIG. 4.—Hinged half ring splint applied for transport.

cal Corps, and by Colonel Blake, M.C., so it is called the Blake-Keller modification. It is a half ring, so you can use it on either side. It is simpler for packing and transport, and it is

the best splint in the forward area. For the stretcher cases in the battlefield this is the splint that we have made standard, and it has been used in all our work since the first of last July. It is very simple, as you see. It is used in the field where the man is picked up, since it can be applied in a hurry, thus saving your stretcher-bearers as well as the wounded (Fig. 5). This loop is put over the boot, and buckled.

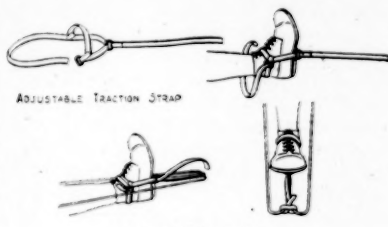


FIG. 5.

The loose end of the strap is fastened to the end of the splint to get as much extension as you think necessary. It is always put on over the boot; never take the boot off, as the strap without the boot would interfere with the circulation. The other supports are obtained by using slings tied about the splint, as here shown (Fig. 4).

So that you have with a splint like this, a splint that can be applied in a very few moments, and with which the man can be handled and gotten to the rear fairly easily. Now the importance of this is, of course, tremendous, and you who haven't been at the front and seen the work and studied the thing can hardly appreciate just what its great value is.

Previous to the battle of Arras, in 1917, the mortality for fractured femurs alone in the British Army was 80 per cent. in the forward area; 80 per cent. of all femurs died in the forward area. Because of the great mortality, just before the battle of Arras the third British Army started to apply splints in the field. The Thomas splint was used for the thigh injuries and trained stretcher bearers were used who could apply a splint like this with extension, with a field dressing to thigh and get away with it in no more than two minutes' time. Now, I fancy there aren't many men in this room who can put that on a man with a broken femur and put a dressing on it, and tie the slings in two minutes' time. They were trained to do that,

and our men are similarly trained. Every move counts. These splints have been put on right on the battlefield; and this has been continued since last January when our men began their raiding parties. The stretcher bearers have rivaled each other to see how far forward they could carry these splints, until finally when a raiding party went over the top every party carried with it a certain number of stretcher bearers and stretchers and with them went the Thomas splints, leg and arm splints, and they were applied in No Man's Land or the German trenches, wherever the man fell. When such a system of training was worked out in the British Army, and which has been practically copied by us, it meant the difference between a mortality of 80 per cent. for femur cases such as they had in the beginning, and a mortality of not over 30 per cent. At the battle of Arras the British Third Army had over 60,000 casualties pass through the casualty clearing station—our evacuation hospital. Of that number 1,009 had fractured femurs, and the mortality in that fight when the stress was the greatest, when they had things working under great disadvantages, the mortality in that fight was cut from 80 per cent. down to 30 per cent. Many times men died, not because of the original wound, but from the injury of transport. A man may be badly wounded and lie out in the field two days and not be badly shocked when you find him. On the other hand, a man may be picked up a couple of hours after he is wounded and be brought back, however, in great shock. Moving a man around with the bones loose inside the muscles may lacerate the muscles and tear the blood vessels or the nerves to such an extent that the man either loses his leg from the rupture of the vessels, or develops such a state of shock that he doesn't get to the evacuation hospital alive. This has been clearly demonstrated as a principle, and Colonel Crile, in his last article on "Shock," in his short, terse sentences on his things that you are to do, says: "Put on the Thomas splint as far forward as possible," and he is talking about shock. Now that is the first principle of the treatment of your wounded man—get him in alive. That's the first thing, and to get him in alive and in condition so that the surgeon can operate on him, or fix him up; this splinting is of the utmost importance. Previous to the use of the splints in the British Army, not only a large number of femur cases died, but a large

number of them, when they arrived at the C. C. S., were in such a state of shock that they could not be operated upon and had to be deshoocked before they could undergo operation, which, of course, lessens the chances of recovery and gives the infection a better start. Now, in the battle of Arras, not only did a large number come in, but every one arrived in such condition that the surgeons could perform the operation immediately.

This is so important that it has been made a definite part of the training of stretcher bearers and ambulance corps men in all our units, and this has been one of the special tasks of the orthopedic surgeon. The orthopedic surgeons assigned to the divisions have given a regular course of instruction for the stretcher bearers.

When you get your man into the evacuation hospital, the closing of the wound is carried out by the surgeon, and in our organization the chief of the surgical division has taken charge of the case at this period; getting him there is the duty of the divisional orthopedic surgeons. After he has had his operation performed, then the question of putting him up in proper splints begins again, and at first the surgeons tried to treat and splint the cases they were responsible for themselves. But since this did not work out satisfactorily, splinting teams were organized. And since the St. Mihiel fight as soon as the surgeon has finished the operation he steps aside from the table and the splint team assumes charge for dressing, splinting, and transport. The team is composed of one orthopedic officer and two enlisted men and these enlisted men have all been Class C men salvaged through the training battalions. The splints are put on and arranged in standard position. Then they see that they are started off properly to the rear, or follow them to the wards to see that they are taken care of there, if, for any reason, the cases are to remain. From the standpoint of the surgeon he is free when he has finished the operation. He steps to the next table and goes on with his operating. The organization which is now in use has resulted in a saving of from 30 to 50 per cent. of the output of the hospital.

In the war work, of course, you do not have a patient in one hospital any considerable length of time. At home we expect to keep a patient in a hospital until he is well. In war this is impossible. You have the man perhaps a day at this hospital; probably two days at

the next one; a day or two at the next, and so on, and the man may be in half a dozen before he gets to the base port to go home. It is absolutely necessary, you see, because of this, to decide upon methods or positions as well as splints, that will be used everywhere, in order to get the best results. If you do as was done in the beginning, put up the leg with a broken femur much flexed, and the order comes to evacuate the case the next day, you cannot evacuate him in that position; you have to pull it down. If you have had him up there three or four weeks and ossification or repair has started, and you pull that leg down, you damage the tissue, and delay in healing naturally results. After much study it was decided that certain positions were most favorable for transport, and that if the man was put in that position on the operating table in the evacuation hospital he could be easily handled and transported without disturbing the position of the bone. The positions which have been standardized are positions which will be pictured in the new splint manual, which will be a handbook on the treatment, as well as types, of splints.

You can put the man up in 30 degrees of flexion with a wound of the thigh, with traction, and in that position the man can be moved perfectly well. He can be moved in ambulance, he can be taken in a hospital train, or put on shipboard and sent home without once disturbing the position. In that way you shorten the period of recovery and once the splints are applied they are not disturbed, and the splints that are put on in the evacuation hospital are continued wherever the man goes, except that for the upper leg cases when you have the lacerated wounds around the buttock, the ring cannot be used. For those we use the Hodgen splint (Fig. 6), or the long Liston (Fig. 7).

The other type of splint (Cabot posterior wire splint, Fig. 8) for the leg is this one here (showing) which was designed for the lower leg and ankle injuries, and it can be used in connection with the Thomas splint if you wish.

Now, for the arm conditions, the principles are the same, and for transport in the field this (Fig. 9) is the splint that is used, similar to this one for the leg. It is on the same principle exactly. The Thomas splint has been adapted for the arm and the arm is put in here. With a splint like this on, a man found in the

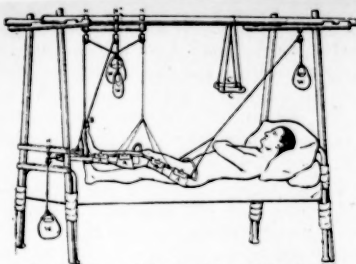


FIG. 6.—Hodgen splint suspended on Balkan frame.

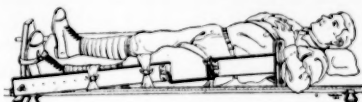


FIG. 7.—Long Liston splint applied for transport.



FIG. 8.—Cabot posterior splint.



FIG. 9.—Thomas arm splint applied for transport from field.

field having a smashed humerus can be handled, in the field in an ambulance, or on a train, with little, if any difficulty. In changing dressings the traction should not be disturbed. This is the hinged arm splint (showing) which we are now using entirely. At the beginning we had two types: one with a fixed ring and the other with a hinged ring, and in the new splint manual this will be the only one. We won't have a stiff ring for the arm at all. If you want, for instance, the arm fixed at the elbow, it is easy to bend to get the position. Every case in the field of arm injury would be brought in with this type of a splint

on. You wouldn't use that type of splint for an injury to the wrist, but this will meet everything above the wrist that you have to take care of in the field.

Now, when it comes to the question of traction, it is desirable to have something that makes it possible to get traction on the humerus with the elbow flexed, with the fracture low down, in which so commonly the lower fragment drops backward and you want to get traction downward and forward on the arm. This (Fig. 10) is the type of splint, that we use for



FIG. 10.—Jones humerus extension splint.

that. It is the Jones humerus traction splint, which works in this way (illustrating). With it fastened in this way you get the moderate pull that you want to draw the fragment into place and hold it there. It also gives you a chance to put the hand in a supinated position so that when it ultimately heals the lower part will be in normal relation to the upper instead of twisted inward, as it frequently is. This is the splint you see much used in the low humerus injuries.

A type of splint has been devised that is one of the most useful things that one can find and that is this wire ladder splint (Fig. 11) (show-

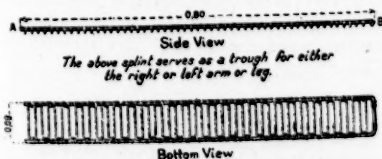


FIG. 11.—Wire ladder splint material.

ing), which is nothing but two pieces of steel with these cross wires soldered on to it. It hasn't been possible to supply them in the numbers required; the demand has been so

great. You can use it in a badly smashed thigh to get added support. You can put it on the side of a splint like this. The number of ways in which you can use it is infinite.

For the forearm there is nothing better than that type of splint. If you have a forearm badly injured, you many times need traction just as much as you need traction of the leg for the femur injuries. You can accomplish it perfectly well with this splint, and it will give the satisfactory supination. (You should never put a forearm in pronation position). With the splint bandaged to the upper arm, with your traction here, you practically have all that is needed. Then for the rest of the splints:

Where you want a support for a smashed hand this wire ladder splint (showing) can be bent double and you have an ideal splint. That has been supplied to our army in great numbers; thousands and thousands and thousands have been used in this way, and it is the most useful rough and ready thing that you can possibly have.

Now, there is one simple splint that is used for a large number of cases. This is the so-called Jones cock-up splint (Fig. 12). This is



FIG. 12.—Jones cock-up splint.

used in a great many cases of gunshot wounds. In these cases it becomes necessary to put the hand up in such a manner that the function of the member will be the best possible. It should be put up in the position most feasible for ultimate function. It leaves the fingers free and with the wrist dorsally extended. It is also a very good splint for musculospiral cases and for wrist drop, which is common from all these battle casualties.

Now, with this small group of splints that I have shown you here you have splints that will meet almost everything that is necessary for army work. To show how well they work, when it came to the question of transporting a large number of our seriously wounded to the States—the reason for sending them being that with the rapid expansion of the army there was difficulty in establishing hospitals fast enough to

take care of the wounded—it was necessary to try out a system of handling cases to see if we could get them home without harm to the men. At first it was thought impossible, but the military necessity made it necessary. When the first group of men were taken down to the ship and put aboard I went myself with the convoy to the ship. I went on board each ship and explained to each ship's surgeons the type of splints which the men in the convoy had, and demonstrated four splints—that's all—and I was able to say to them that the only thing they need learn would be four splints and that would cover everything we would send home.

What I have shown you now represents the splints that are standard in the United States Army. They will meet practically all needs, and it is quite obvious that these same things, which have shown such splendid results for the army, will be used in civil hospitals, so that it behooves all of us to learn how to use them. We are never going back to the Buck's extension and T splints for femur cases if we are to get the best results.

Care of Amputation Cases. Another responsibility which has been put upon the Division of Orthopedic Surgery is the care of the cases in which amputation of one or the other extremity has been necessary. It has been found that if these cases are handled rightly that their stay in the hospital is relatively short and that in from four to five weeks from the time of the amputation, the majority of the cases can be up and about, the leg cases walking about upon temporary artificial limbs. The chief matter of importance in these cases was to prevent unnecessary retraction of the stumps in healing and to prevent the contracture of the joint next above. This work has been carried on very largely over here under the direction of Major Philip D. Wilson, who has been assigned to the orthopedic division, and the men, upon their return to the States, will in proper time have the permanent legs fitted under the direction of the army organization.

Occupational Therapy. To give you an idea of how thorough the organization of the army is with reference to the ultimate function of the injured part with our men, the appreciation of the fact that use of the injured part up to the limit of toleration assists in healing and prevents harmful contractures has been constantly borne in mind, and a corps

of reconstruction aides has been created and curative workshops established. In the first place, while the patient is still lying in bed he is encouraged to use his hand or damaged part as much as possible and special occupations have been arranged to encourage such activity. Not only does this assist in the healing of the part locally, but the general mental attitude of the patient (a very important factor) is of course much improved and his restlessness, which otherwise would naturally be expected, is largely controlled. Even though the injured part may be of the lower leg, early occupations in which the hands alone are involved assist in the recovery, since when the man is fully occupied he is much less restless, there is much less unnecessary moving about in bed—with the natural improvement of the local part. When it is possible for the patients to be up and about, the curative shops are used for the same general reasons.

You will see from this that the organization of the Orthopedic Section of the Medical Corps of the Army has been planned largely to insure the most perfect restoration of function that it is possible to obtain with the wounded men, and this emphasis upon the function as the basis of the ultimate test or result must be carried into civil life the same as it has been insisted upon in the army organization.

These, in general, gentlemen, are the plans under which our Division has been operating and I cannot speak too strongly in compliment of the men who have done so much of the work or of the way in which the regular Medical Corps has supported us in our activities. Because of this work and knowing personally of the results as they are coming to the base ports, I have a very strong feeling that when we go home there will not be many of the wounded men whom we will see about of whom we will have reason to be ashamed, or who will be reflections upon the medical care received over here.

SUFFERING IN THE FAR EAST.—At a recent meeting of workers for the American Women's Hospitals, prior to opening a campaign for \$40,000 in this state, the sufferings of the people in devastated portions of France, Serbia, and Armenia were described by Dr. Barbara Hunt. An effort will be made through the country to raise \$250,000.

Original Article.**APPLIED ANTHROPOLOGY.**

BY CAPT. C. L. LOWMAN, SAN FRANCISCO.

To most of us the term anthropology is usually associated with archeology and conveys little meaning except in reference to dead bones and prehistoric remains. Few of us ever recognize that it is a live subject and deals with matters of practical value to us as medical practitioners in our every day work. We presume, of course, that to professors of comparative anatomy in our colleges it would be a subject of value; but most of us will immediately think of the college museum when the term is mentioned. About the closest that most of us get to the subject is in taking the weight height, and occasionally girths in connection with physical examinations or for vital statistics. A little more exact application of anthropometry is in use to a greater or less extent in the physical educational departments of our high schools and colleges, but I am sorry to say that in many of them the information recorded has not been translated into action designed to meet or correct physical needs demonstrated by the examinations.

We all of us use, every day in our practice, isolated anthropologic facts, but we are apt to lay most of the stress on symptoms, pathology, and therapy. It is only when we have some very obvious symptoms which we recognize as occurring usually in certain types; for example, in some endocrine disturbances, or in enteroptosis, which we know is usually found in types with relaxed backs, that we give any consideration to facts referring to types of body or variations from some vague norm which lurks in the dimmer recesses of our thinking. Very comprehensive and valuable data will be obtained if, in beginning our examinations of patients, we approach the matter primarily, not with symptoms or pathology in mind, but with the idea of noting the general type, then the smaller variations peculiar to the type. We should not prejudice our opinion or conclusion in advance even when there is a perfectly obvious pathologic fact staring us in the face. For instance, a case of obvious Pott's disease may present itself for examination; we should not just look at the case, diagnose tuberculosis of the spine and recommend treatment for that

condition only. If we would temporarily forget the obvious lesion, and note that the individual is of the thin flat-chested type, and would be apt to have other postural defects, we would strip the patient and record the exact anthropologic findings—noting faulty body mechanics which are usually in accordance with the type. Or take another illustration—that of pulmonary tuberculosis. Our first observation, plus a few sentences in the history, make us suspicious at once, and the patient is stripped to the waist, lungs examined, and treatment for pulmonary tuberculosis outlined. If we had gone a little further and momentarily disregarded the essential diagnosis, we should have correlated in our mind that most tubercular individuals have other conditions which cause disturbances of function. Consequently, on having the patient stand, wholly stripped, we might note more or less abnormal spinal and pelvic alignment, some knock-knee and flat or weak feet. Now, if it is important to attend to the correction of these static deviations in otherwise normal individuals on a basis of relieving their strain and increasing their efficiency, how much more essential is it to do so in the case mentioned. Yet the fact is that seldom are all these disturbing elements considered, the pathologic process only being treated. As rest and conservation of nerve force are vital in the treatment of tubercular cases, is it wise to allow a woman with pulmonary tuberculosis and weak feet, to continue to walk around on a narrow-heeled shoe and wearing an improper corset?

For purposes of quick observation, a very rough classification is sufficiently practical for everyday use in the general sizing up of patients.

1. The slender, lythe type.
2. The short, wide, stout type.
3. The intermediate type.

In the latter class fall the medium, or what we actually think of as the average normal. As has been pointed out by several writers, especially Goldthwait, certain physical findings are met with in each group, i.e., the temperamentally nervous, high strung individuals are usually in class 1. They are quite apt to be neurotic, likely to be over ambitious, and to try to carry a 40 h.p. load with a 10 h.p. body. They usually have static deviations of one kind or another. Long backs are apt to be weak backs; long nar-

row, low arched feet are potentially weak feet. The long flat chest which we know as phthisical occurs in this type, and as the name implies, it predisposes to tuberculosis. The usual relaxed posture predisposes to visceroptosis, which in adults is a marked factor in functional disturbances of many kinds. Similarly, those of the short type are apt to be phlegmatic, slow moving, and sluggish; are apt to develop obesity; oxidize slowly; are hypo-thyroidal, with skin perhaps dry, fingers stubby, hands squared, etc. Posturally, they may have droop shoulders, hollow backs, knock knees, pronated and weak feet and, later on depressed arches. Still later they are prone to develop such joint conditions as hypertrophied synovial linings with fatty fringes and villous arthritis; varicose veins and poor circulation in the extremities; pendulous breasts and abdomen; toxæmias due to intestinal stasis, and neuritic disturbances. Those of the middle type, who are more apt to be nearer our ideal normal, are not the ones who make up the general run of the practitioner's cases. They seek medical relief only for injuries, acute infections, and such conditions. It is in the other two groups that most chronic ailments are developed and they make up by far the greater number who have lowered physical efficiency of so-called functional disturbances.

Now if the correlation of these facts is borne in mind, it can readily be seen that more comprehensive and valuable examinations will be made and the appreciation and correction of elements of faulty bodily alignment will be the means of curing or improving a high percentage of the functional disturbances. Those potential weaknesses that reduce efficiency and waste the vital energy, which is so much needed to combat pathological processes, must be taken into consideration if the highest degree of good results is to be obtained. In other words, skeletal faults must be noted and corrected in all cases, both functional and pathological, or results will not be as highly satisfactory as they should be. When we come to realize that attention to postural faults in the adult is productive of much good and that certain types are more prone than others to have potential weaknesses, we will pay closer attention to these facts in relation to the growing generation.

One of the most instructive lessons of this great war is that the number of recruits rejected for physical defects has been very large,

and that a great percentage even of those accepted have filled up development battalions and convalescent detachments. In the course of time these numbers and percentages will be known and this information should be thoughtfully weighed and our future policy modified by it. Our schools and colleges must change their policies in regard to their physical educational methods. More corrective elements must be introduced; in fact special departments for handling corrective posture work must be established. Heretofore this work has been left almost entirely in the hands of educators and physical directors who have not had the proper coöperation or supervision of the medical fraternity, and consequently this phase of the situation has not been deeply appreciated or fully enough developed. The appreciation by the physician and surgeon of the relation of postural faults to the physical deficiencies and ills of adult life will open the way to one of the greatest applications of preventive measures that has ever taken place. I do not think it is too visionary a thing to suggest that with the establishment of some form of universal physical training, or universal military training, the government anthropological service could readily be expanded and universal physical examinations of all children be made by it. Such records, preserved, would be invaluable during the life of that individual.

The work already accomplished in connection with the recent national baby saving campaigns demonstrates how this sort of thing could be done. With reasonably simple and easily understood charts, and an organization developed from the nucleus of trained workers already in government service, the task would be no more difficult than the baby saving campaign already mentioned. Speed or time would not be so essential as to necessitate making the examinations at the same time for all the children. Any time during the first two years after the child enters the grade school would be satisfactory. This need not in any limited sense be a medical examination, but a purely physical one, and being a government survey, it would be impersonal and ought not to be objectionable to any large group of citizens.

Many points worked out in the recent examinations of large groups of men for army service would be helpful for this general examination of school children. Triplicate records

would be of value, one for the government, one for the school, and one for the parents. The most important data should be strictly anthropologic; especially the measurements of leg and body lengths, the few important girths, type of chest and back, foot conditions in reference to weight bearing, and the notation of potential weak points and such static faults as are already manifest. Other important data, such as condition of eyes, ears, nose and throat, teeth, etc., should also be registered. The question of mental testing and examination might also be undertaken, but would not be essential from the standpoint of anthropometry.

This could serve as a proper guide in the growth and development work throughout the school life. It would be of very great value to any physician or surgeon handling a given case, as a matter of reference. It would aid in straightening out many a medico-legal tangle involved in accident compensation cases. Going back to an early government record would be of great value in establishing facts regarding physical conditions. Its chief value would be in its aid to the early establishment of corrective prophylactic therapy.

We should make the best possible use of the lessons learned during the past four years and there is none more evident than the necessity of increasing to the highest possible point the strength and efficiency of the coming generation. We shall undoubtedly advance to a more prosperous and intensive stage of progress, necessitating greater exactions on the strength and nerve power of the nation—and how better can we prepare to meet such an advance than by taking stock of the physical condition of the children of today? The medical profession should be among those most interested in this matter, because by training and inclination they stand for advance in all preventive measures. With this in view, greater importance must be attached to the study and teaching of those facts of anthropology which will enable our medical students to recognize that deviations of skeletal alignment, as well as organic malfunction, ultimately result in symptoms, and that the time to treat such deviations of alignment is in their incipency, which occurs in early childhood.

American Medical Biographies.

DAVIS, NATHAN SMITH (1817-1904).*

Untiring, irrepressible, uncompromising and incorruptible, Nathan Smith Davis occupied for half a century a shining place in the foremost rank of the medical profession of the United States. He was father of the American Medical Association and author of a History of Medical Education and Institutions of the United States (1851). In Chicago, which became his adopted home in 1849, he soon distanced all rivals in the race for fame, popularity and material success.

He was born in Greene, Chenango County, New York, January 9, 1817. His parents, Dow Davis and Eleanor (Smith) Davis, were pioneers and the first 16 years of his life were spent on a farm. From early childhood he was spare of habit, his apparently frail body being dominated by an unusually active and tireless mind. His forehead was high and broad, and his head, which seemed too large for his body, gave external evidence of his chief characteristic, an intense and dominating intellectuality. His intellectual superiority first manifested itself in his work at the village school and led his father to give him the advantages of a higher course of study at Cazenovia Seminary in Madison County. He began the study of medicine in the office of Dr. Daniel Clark of Smithville Flats, and continued it in the office of Dr. Thomas Jackson of Binghamton until he graduated, in 1837, from the College of Physicians of Western New York at Fairfield, before he was 21 years of age. His thesis on "Animal Temperature" was selected by the faculty to be read at the annual Commencement exercises.

Dr. Davis practised in Vienna, N. Y., 1837-1838, and in Binghamton from 1838 to 1847. In 1838 he married Anna Maria Parker of Vienna, N. Y., by whom he had three children, a daughter and two sons. Both of the sons became physicians. The elder, Dr. Frank Davis, showed promise but died of miliary abscess of the kidneys after about ten years of practice. The younger son, Dr. N. S. Davis, 2nd, was associated with his father in practice and teaching, and, later, succeeded him in the Northwestern University Medical School. A grandson, Dr. N. S. Davis, 3rd, is already well started in a successful career.

At Binghamton he soon became prominent in

* From the forthcoming "American Medical Biography," by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

medical matters. He was secretary of the Broome County Medical Society from 1841 to 1843; librarian, from 1843 to 1847; and member of the board of censors for several years. From 1843 to 1846 he represented the county society in the New York State Society. He offered resolutions at the State Society in 1843 calling for a lengthening and grading of the medical course of instruction. The discussions of these resolutions led to the calling of a national medical convention in New York in 1846, which was the beginning of the American Medical Association. The acquaintance he formed during the time of his activities in the state medical society and in the organization of the American Medical Society and in the organization of the American Association led him to move to New York City in 1847. Here he took charge of the dissecting room of the College of Physicians and Surgeons, lectured on medical jurisprudence in the spring course, and took editorial charge of the *Annalist*, a semi-monthly medical journal.

In 1849 he moved to Chicago to accept the professorship of physiology and general pathology in Rush Medical College. In 1850, he was elected to the chair of principles and practice of medicine and of clinical medicine. Mercy Hospital, which was opened to the public through his invitation, was the first public hospital in Chicago. In 1851, the Sisters of Mercy took charge of it and have controlled it since, in affiliation with the Northwestern University.

In 1859, he and a few other Rush College professors founded the Medical Department of Lind University. Upon the extinction of that college, they founded, in 1863, the Chicago Medical College, of which he was professor of principles and practice of medicine, and later *emeritus* professor, until his death. He was dean of the faculty until he ceased active work in the college. Here his pioneer ideas about systematic medical instruction were carried out, and Chicago Medical College became the first medical college to adopt a three years' graded course. In the 70's, and mainly through his efforts, the college became the medical department of the Northwestern University.

Dr. Davis was one of those who organized the Illinois Medical Society and the Chicago Medical Society. He was also one of the founders of the Northwestern University, the Chicago Academy of Sciences, the Chicago Historical Society, the Illinois State Microscopical Society,

the Union College of Law, and the Washingtonian Home. He was an honorary member of many medical and scientific societies in this and foreign countries, and was honored by most of the societies to which he belonged by election to official positions.

His ability shone brightest, perhaps, as a writer and orator. Besides having edited the *Annalist* at New York, he was editor of the *Chicago Medical Journal* from 1855 to 1859. In 1860, he founded the *Chicago Medical Examiner* and edited it until it became merged with the *Chicago Medical Journal*, in 1873. He was the editor of the *Journal of the American Medical Association* from its establishment, in 1883, until he resigned, in 1889. At different times he was also editor of the *Northwestern Medical and Surgical Journal*, of the *Eclectic Journal of Education and Literary Review*, of the *American Medical Temperance Quarterly*. He wrote a textbook entitled, "Lectures on the Principles and Practice of Medicine," 1884; second edition, 1887, Chicago; a "Textbook on Agricultural Chemistry," New York, 1848, for which he received a prize from the New York State Agricultural Society; a "History of Medical Education," Chicago, 1855; "Clinical Lectures on Various Important Diseases" (two editions), edited by his son, Frank H. Davis, and many monographs upon medical subjects, of which those on alcohol, temperance and medical education attracted most attention.

As an orator, he excelled, and he made good use of his oratorical ability. Temperance was one of his favorite topics, and he lectured frequently on subjects connected with hygiene and popular science. As a medical lecturer he had few equals in his day. His exposition of a subject in the classroom was clear and systematic, and but few of his students began practice without knowing how to use the Davis treatment in successful competition with their rivals. But it was when giving advice to his students and discoursing upon their duties and opportunities, and revealing to them the ideals of conduct and achievement which they saw carried out so faithfully in him, that he became eloquent and inspiring. As his student, the writer does not remember so much what he said about achievement, as how he made him feel about it. The words are gone but their influence remains. Our knowledge was acquired from all of our professors, but our inspiration came from him.

Dr. Davis died June 16, 1904, at the ripe age

of 87 years, and is remembered as one of the greatest and most influential Chicagoans of his time. He was ever active as a leader and promoter of reforms and improvements in public and private life. He was a family physician in the old and best sense of the term. Although he had a large consultation practice he never refused to visit the poor, and never made his charges out of proportion to their means. His capacity for work was extraordinary. His private practice and consultation work were enough to monopolize the energies of an ordinary man; his college and hospital and medical organization work were enough for another; while his editorial duties, his medical writings and scattered work on temperance and other public reforms would be considered sufficient to take up the time of still another. Probably no man ever made better use of his evenings and nights than he. Every moment not utilized in sleep was utilized in work. Such was his devotion to his work and so ardent his desire to accomplish his ideals that he could not bear to think of amusements and vacations. Different kinds of work constituted all of the change he required. He was glad to get home at night from the cares of his practice to the peace of his editorial or other literary work, and in the morning he was glad to see his patients again. The world is changing. This type of man is becoming a rarity. What have we to make up for it? It is good for us to preserve the records of such lives that we may compare notes and have a standard for self-criticism in these days that are so different.

HENRY T. BYFORD, M.D.

THACHER, JAMES (1754-1844).*

STANDING at the head of the list of medical historical writers in this country is the name of James Thacher, son of John Thacher of Barnstable and of a daughter of a Mr. Norton of Martha's Vineyard, Massachusetts. James was born at Barnstable, February 14, 1754. As soon as he had obtained a common school education he studied medicine with Dr. Abner Hersey of Barnstable and then, aroused to enthusiasm by the opening events of the American Rev-

olution, he went up for examination as surgeon's mate in the army, passed high in his tests, and obtaining his appointment, served under Dr. John Warren at various small hospitals in Cambridge for a year. He was then promoted to the position of surgeon in the army, and during the succeeding seven years traversed the colonies from Castine, Maine, to Yorktown, in Virginia; next, at the head of a band of sharpshooters; once on the ill-fated Penobscot expedition; then in charge of a chain of hospitals containing altogether 500 beds; and, finally, he was present at the surrender at Yorktown. During that time he obtained wide experience in medicine and in military surgery. Retiring from the army January 1, 1783, he settled in Plymouth, Massachusetts, married, in the following year, Susannah Hayward of Bridgewater, near at hand, and to the very end of his long life continued active in practice or in medico-literary labors. In childhood he had acquired a slight deafness, which gradually increased with age; yet, in spite of the burden and a distressing tinnitus, he labored cheerfully to the end, devoting his declining years to the preservation of everything connected with the Pilgrim Fathers, and nothing pleased him more than to act as a guide to strangers in Plymouth, every historic character and mansion of which he knew by heart. There he died, May 24, 1844, when in his ninety-first year.

Dr. Thacher was a voluminous writer, beginning as early as 1802, when he contributed a paper on the art of making marine salt from sea water to the American Academy of Arts and Sciences. His "American New Dispensatory" appeared in 1830, a fourth edition in 1821, and "Modern Practice of Physic" in 1817, followed by a second edition in 1821. Next year came a charming book, "The American Orchardist," in which he not only showed how to grow fine apples, pears, plums, and grapes, but gave space to the manufacture of cider and wine from apples and currants. A most interesting book was his "Military Journal during the American Revolutionary War," (1853), written day by day for nearly eight years. Amongst the many noteworthy episodes in this splendid volume are the visit of Washington to the hospital of which Dr. Thacher had charge, his accounts of the personality of our national hero at the bedside of the wounded, on horseback, or standing amidst his staff, or at a dinner given by General and Mrs. Washington, to

* From the forthcoming "American Medical Biography," by Dr. Howard A. Kelly and Dr. Walter L. Burrage. Any important additions or corrections will be welcomed by the authors.

which Thacher was invited as a particular guest. Then we pass to a word picture of the capture and execution of Major André, the pathetic scene of the court-martial of mutineers in the midst of the depths of winter; that silver bullet swallowed by a spy, with its incriminating letters inside, brought back to the world by Thacher's dose of tartar emetic, and personal meetings with Lafayette, who was his patient for a while. The end of this famous book is enriched with unexcelled lives of Lafayette, Steuben, and other men of army fame during the Revolution.

Although Dr. Thacher wrote many papers for the medical journals of his era, on such topics as "Hydrophobia" and "Medical Plants" his *magnum opus* is the "American Medical Biography," published as two volumes in one, in 1828. This is made up of 163 biographies in 716 octavo pages with 14 delightful portraits of the eminent physicians of his time and of the past, introduced with a very readable history of medicine in America. In his preface he says: "Materials for this work have been so abundantly accumulated that the author has been obliged to suppress some memoirs, and to retrench others. lest the volume should be augmented to unwieldy size . . ." This work remains the fountain head of American medical biography and a perpetual monument to the fame of James Thacher. Not only does it reveal the writer's knowledge of the character and works of the leaders in medicine, but it proves his wide friendship with his contemporaries, for he received assistance from a large number of the prominent men of the day, notably Hosack and Francis of New York, Mease of Philadelphia, Thomas Miner and S. B. Woodward of Connecticut, and G. C. Shattuck of Boston.

Other works of Dr. Thacher were a "Practical Treatise on the Management of Bees," (1829); "Essay on Demonology, Ghosts, Apparitions and Popular Superstitions," (1831); and a "History of Plymouth," (1832).

In writing even a brief notice of this once well-remembered physician we should not forget to point out that he stood so well as a teacher in medicine that he was invited, but declined, to lecture on the theory and practice of medicine at the Fairfield Medical School in 1813, when Dr. G. C. Shattuck resigned, owing to difficulties of winter travel. Thacher was one of those men who love to write letters, and those of his that have been preserved only cause re-

gret that more were not saved, exhaling as they do the charming personal traits of the writer. He believed in medicine, laughed at little doses, favored phlebotomy, at least in desperate pneumonia, and gave much time to botany and its development for the uses of medicine. Harvard conferred on him her A.M., in 1808, and in 1810 both Harvard and Dartmouth gave him their honorary M. D.'s.

To sum up in a few words the full life of this able physician it should be said that, in spite of the misfortune of deafness, which long barred him from a satisfactory speaking acquaintance with people around him, he studied assiduously for the benefit of his patients and posterity, and in his published works he has left a name that will endure so long as American medicine has a history.

JAMES A. SPALDING, M.D.

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WARREN, JONATHAN MASON (1811-1867)*

Jonathan Mason Warren was born in Boston on February 5, 1811, in the house No. 2 Park Street, then occupied by his parents, and died there on August 19, 1867.

He was the second son of Dr. John Collins Warren and grandson of Dr. John Warren. In 1820 he entered the Boston Latin School, and remaining there through the full term, graduated with his class in 1825. After studying two years with a private tutor he entered and was admitted to the Sophomore class of Harvard in 1827. At the end of three months, owing to ill health, he was obliged to leave college. He retained, however, his associations with the class of 1830, and in 1844 received the degree of A.M. from Harvard and in 1849 became a member of the Phi Beta Kappa Society. Invalidism due to dyspepsia brought on probably by too close an adherence to the system of the day of much and exacting attendance at school exercises which left but little time for hygienic recreation, prevented him from continuing his studies at Harvard. After a trip to Cuba in search of health, in the spring of 1828 he returned to begin his medical

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studies under the tutelage of his father. The old homestead had been the resort of medical students who served an apprenticeship, after the custom of the time. The class occupied a room with sanded floor near the entrance, for the purpose of study and took their meals under the same roof; a custom dating from the period when the Medical School was still at Cambridge and probably at the time in question gradually yielding to a more modern system. In the fall of 1830 he entered his name as a student at the Medical School on Mason street, from which he graduated in 1832, at the age of twenty-one.

In March, 1832, Dr. Warren sailed from Boston for Europe, the ship "Dover" shaping its course first to Charleston, S. C. He reached Liverpool at the end of May where he found an epidemic of cholera in progress, which visited Europe that year. After visiting the clinics of Astley Cooper and Charles Bell in London and Syme and Liston in Edinburgh, he arrived in Paris in the fall of that year. Here he studied surgery under Dupuytren, Lisfranc and Roux and medicine under Louis. Among his fellow-students may be mentioned the names of Jackson, Bowditch, Holmes, Bethune, Hooper and Inches of Boston, and Gerhard, Peace and Pepper of Philadelphia, forming a group of prominent Americans afterwards known as the "pupils of Louis." After two winters of study in Paris he visited, in the spring of 1844, Dublin, where Kennedy was master of the lying-in hospital and Macartney was presiding over his interesting museum at Trinity College. The winter of '34-35 was passed in Paris, where he saw Dieffenbach, on a visit from Vienna, perform his rhino-plastic operations. He also learned from Roux his method of operating for cleft palate, an ailment with which his own name was destined later to be intimately associated. He returned home in June, 1835, prepared to begin his professional career.

On the departure of his father for a visit to Europe in 1837 a large practice was entrusted to his care. In this he was eminently successful and became prominent, both as a medical, and later, as a surgical practitioner. He was well qualified for these duties not only by personal traits but by sound education backed by good judgment.

In 1843 he published his first article on staphylorrhaphy* an operation in which he was

the pioneer in this country, the method which he devised being substantially that which is employed today. A full account of this operation is given in his book, "Surgical Observations and Cases," published in 1867, in which he refers to one hundred operations for fissure of the soft and hard palate performed by him.

On April 30, 1839, he married Anna Caspar, daughter of Benjamin Williams Crowninshield, Congressman, and at one time secretary of the navy under Madison.

In February, 1846, he was elected one of the visiting surgeons of the Massachusetts General Hospital and on October 16 of the same year he assisted his father in the operation at this hospital, which was destined to be known as the first public demonstration of surgical anesthesia. A few weeks later he substituted for Morton's apparatus the cone-shaped sponge which was used for the purpose of administering ether at the hospitals for twenty years.

On the sixth of May, 1853, while returning from a meeting of the American Medical Association in New York, he was a passenger on the train which met with the so called "Norwalk accident" in which the cars went at full speed through an open draw into the river. Several members of the Association were on the same train and Dr. Peirson of Salem was killed. Dr. Warren superintended the resuscitation of one of the first victims removed from the water, artificial respiration being kept up for two hours.

Dr. Warren's health, never robust, seems to have permanently suffered from the shock of the experience and necessitated two visits to Europe in the following years. In 1864 he delivered the annual address before the Massachusetts Medical Society on "Recent Progress in Surgery," which summarizes well the status of surgery immediately preceding the antiseptic era.

He was senior surgeon of the hospital for several years preceding his death in 1867. He was survived by his wife and four daughters and a son, Dr. John Collins Warren.

Dr. Warren was a man of delicate frame and of refined and distinguished bearing. He combined a cheerful disposition with qualities of mind and heart which made him popular with patients and friends alike who flocked in large numbers to pay him a final tribute.

J. COLLINS WARREN, M.D.

* New England Quarterly Journal of Medicine and Surgery, April, 1843.

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LEAGUE OF RED CROSS SOCIETIES.

A LEAGUE of Red Cross Societies has been formed for the purpose of making a unified and systematic effort to anticipate, diminish, and relieve misery produced by disease and disaster. This league has been founded by Red Cross societies of the United States, Great Britain, France, Italy, and Japan, subsequent to the conference of Red Cross leaders and medical experts which has been in session in Paris and Cannes for the past five months. The following statement defining the object and purpose of the League has been issued by the American Red Cross.

The objects of the League as formally set forth in its Articles of Association are: 1. To encourage and promote in every country in the world a duly authorized voluntary National Red Cross organization, having as purposes the im-

provement of health, prevention of disease, and mitigation of suffering throughout the world, and to secure the coöperation of such organizations for these purposes. 2. To promote the welfare of mankind by furnishing a medium for bringing within reach of all peoples the benefits to be derived from present known facts, and new contributions to science, and medical knowledge and their application. 3. To furnish a medium for coördinating relief work in cases of great national or international disasters.

The original members of the league are to invite the Red Cross societies of other nations to join, each organization to preserve its national autonomy and all to remain constituent members of the International Red Cross of Geneva. The control of the League will be by general council, composed of representatives of all members of Red Cross societies meeting at designated periods. A governing board of fifteen members will be chosen by the general council to direct the affairs of the League in the intervals between such meetings. Henry P. Davison of New York, formerly chairman of the War Council of the American Red Cross and since January chairman of the Committee of Red Cross Societies which formulated the League's program, is chairman of the League's first Board of Governors. Other members of the board chosen thus far are: Sir Arthur Stanley of the British Red Cross, Comte Kergorlay of the French Red Cross, Count Frascara of the Italian Red Cross and Professor Ninagawa of the Japanese Red Cross. The board selected Geneva as the headquarters of the League and took steps toward putting into practical effect the world health program shaped during the recent conference at Cannes.

The purposes of the League of Red Cross Societies are recognized by the League of Nations in article No. 25 of the latter organization's covenant, which reads: "The members of the League agree to encourage and promote the establishment and coöperation of duly authorized voluntary National Red Cross organizations, having as purposes the improvement of health, the prevention of disease, and the mitigation of suffering throughout the world."

While it is expected that the League of Red Cross Societies will establish intimate relations with the League of Nations, it should be understood clearly that the former, being a purely voluntary, non-political, non-sectarian, non-governmental organization, has no statutory connec-

tion with the League of Nations or with any government.

Mr. Davison, commenting on the League of Red Cross Societies, said:

"The Red Cross Societies of the United States, Great Britain, France, Italy, and Japan have for several months worked incessantly, through their representatives, to devise an agency which could adequately cope with the world problems of disease and disaster. From the outset it was clear to us all there was no institution in the world so well adapted to this task as the Red Cross because of the peculiar hold which it has upon the hearts of all peoples, irrespective of differences of race and religion; because of its fifty years of honorable service in all quarters of the globe; because of the amazing development of its powers in the recent war; because of the anxiety of its membership not to lose the opportunity for service when war service was no longer needed; because, in short, of consensus of opinion, medical and lay, that health problems of the world can never be solved by doctors alone, nor by governments alone, but must enlist hearty volunteer coöperation of the peoples themselves; and no organization can mobilize the peoples of divergent views as can the Red Cross. Recognizing this phenomenon, the five largest Red Cross societies have banded themselves together to bring about Red Cross coöperation everywhere.

"For a practical starting point, we have the well concerted recommendations of one of the most remarkable medical assemblies that ever applied itself to a set of practical problems. The League which has been created will extend to Red Cross societies throughout the world and we hope will in time be universal in membership. The spirit of the founder members of the League; the practical form of organization determined upon; the close ties established between the League and the International Committee of the Red Cross of Geneva, each complementing the work of the other; the interest and active coöperation already evidenced by government heads everywhere and so well expressed in the recent draft of the League of Nations covenant, the love of all peoples for their Red Cross societies, and the compelling need throughout the world, all combine to give assurance that this League of Red Cross Societies will quickly become that great agency for the people's welfare which the founders determined it should be."

OCCUPATIONAL AND INDUSTRIAL THERAPY FOR THE INSANE.

THE extensipn and improvement of occupational and industrial therapy in the treatment of the insane should receive more adequate attention. A pamphlet by L. Vernon Briggs, M.D., reviews the research work in this field which has been reported in medical literature, and surveys the occupational work being done in our schools and hospitals at the present time. It is interesting to observe the policy adopted toward the insane in the middle of the nineteenth century, as compared with the attitude which is taken toward this class of sufferers today. Then, such methods as the straight-waist-coat, the tranquillizing chair, the deprivation of customary pleasant food, and "the pouring of cold water under the coat so that it descended to the armpits" were some of the methods to which physicians resorted.

One physician of this time, however, disagreed with these modes of coercion and advocated bodily labor as one of the measures necessary for the moral treatment of the insane. Dr. Amariah Brigham, superintendent of the Utica Asylum, recommended that workshops where dressmaking, tailoring, basket-making and other industries could be taught should be connected with institutions. For some patients, he believed that mental training would be beneficial, and that reading, drawing, music, arithmetic, natural sciences, and other studies could be taught with good results. In 1847, he advanced his theories against the prevailing views on coercive treatment of the insane, saying that he believed that employment in order to benefit the patient should be for its own sake and separated from the idea of gain. He organized an asylum school, and introduced a great variety of occupational instruction; he established a whittling shop, a printing office, and other industries in connection with his institution. These schools were a part of the hospital routine.

The author of this pamphlet believes it probable that except for the addition of gymnastics and dancing, and the development of the more strictly artistic handicrafts, little has been devised in any state hospitals in this country since Dr. Brigham's day for the diversion and occupation of patients. Would it not be advantageous, perhaps, to put these matters, still under

medical direction, into the hands of educators trained in the knowledge of occupational therapeutics? Compared with the progress which has been made in the fields of therapeutic occupation for the blind, the crippled, and other handicapped individuals, therapeutic occupation for the mentally ill has not received the impetus which it should have received. A comparison of statistics covering the work of a purely therapeutic nature shows little increase in the past two years. Although ward and farm work has increased, this is probably due to economic reasons rather than therapeutic application of this work to individual needs.

In order to make it possible to have all the patients working, an adequate hospital force is one of the first requisites. In addition to expert teachers, a corps of instructors among the nurses, who had taken a course in therapeutic occupation in the training school, would be of valuable assistance in studying the needs of patients. A careful study made last year by the Massachusetts State Board of Insanity of the working capacities of the State institutions under their care shows that they had on June 1, 1916, a total of 17,683 patients, and that the working capacities of the institutions could have provided employment of some sort for 92.54 per cent. of the patients. On that date, 72.66 per cent. of all patients were reported as occupied. Of these, only 3.03 per cent. were occupied in shops and 8.94 in industrial rooms, making a total of 11.97 per cent. of the patients in scientifically directed branches of occupation under special trained teachers. Many of these patients work but a small part of the day.

The importance of occupational therapy is recognized, and a more thorough, systematic organization of occupational and industrial work and educational instruction would benefit the patients and contribute valuable material to scientific research.

PUBLIC HEALTH SERVICE AND VENEREAL DISEASE CONTROL

It is probable that few outside of the medical profession knew of the wide distribution of venereal diseases before our entrance into the world war. When, however, the examination of recruits from all over the country made it

possible to collect data, the problem was found to be so great that concerted action on the part of all the citizens of the United States was called for. In order to make this possible, the Public Health Service cooperated with the State boards of health in establishing for the control of these diseases an organized campaign, with four principal objects in view.

First of all, it was considered necessary to secure the reporting of venereal infections in accordance with State laws or State boards of health regulations; second, that repressive measures be carried on, with isolation and treatment of infected persons in detention hospitals; third, that free clinics be established with proper facilities for early diagnosis and treatment of venereal diseases; and fourth, that a general educational plan be conducted to inform the public as well as infected individuals regarding the nature of these diseases and the way in which they are spread.

By the passing of the Chamberlain-Kahn bill, there was created on July 9, 1918, an Interdepartmental Social Hygiene Board and a Division of Venereal Disease in the United States Public Health Service. Among other things, this act provides for the allotment to State boards of health of one million dollars each year for two fiscal years, for use in controlling venereal diseases. In order that the various States might be entitled to receive this sum, it was stipulated that they must agree to require the reporting of all venereal diseases, to the assignment of an officer of the Public Health Service to the State to cooperate with the State health officer, to make available local or legislative funds, to extend educational measures, to secure additional legislation necessary for developing the control of the spread of venereal infections, and to expend the State allotment along general standard lines in accordance with a system to be advocated by the Interdepartmental Social Hygiene Board. The payment of the allotment for the year beginning July 1, 1919, is conditioned upon the expenditure of a like amount by the State. It is interesting to note that eighteen States have already had the necessary laws passed.

A recent Public Health Report describes the duties and policy of the Division of Venereal Disease. It is specified by law that this department study and investigate the cause, treatment, and method of prevention of venereal dis-

cases, coöperate with State boards of health in carrying on measures to prevent the spread of venereal infections, and promulgate and enforce interstate quarantine regulations governing the travel of venereally infected persons. It is gratifying to observe that in carrying out this program, the Public Health Service has been admirably supported. Druggists pledged themselves not only to discontinue the sale of venereal disease nostrums and to refuse to prescribe remedies for self-treatment, but also to distribute to sufferers circulars advising them to seek competent professional service; the response of the medical profession in reporting cases of venereal disease has been prompt; and the people as a whole have demonstrated their willingness to support the campaign against venereal diseases.

YEAST AS A FOOD FOR MAN AND THE GROWING ORGANISM.

ATTENTION has been called to the value of yeast as a food for man and the growing organism by two articles which have been reprinted from the *American Journal of Physiology*. One considers the food properties of bakers' yeast as a source of food protein. The Germans were the first to make a comprehensive study of the nutritive possibilities of the yeast plant. Reported investigations have shown that such important amino acids as the following have been found to be present: glycocoll, alanine, valine, leucine, phenylalanine, tyrosine, proline, aspartic acid, glutamic acid, tryptophan, lysine, arginine, and histidine.

Some investigators report that from their studies it is apparent that dried yeast has at least three times the calorific value of beef of moderate fat content; that it may be readily digested and utilized by the animal organism; and that yeast diet can produce an average daily gain of about 0.4 gram of nitrogen per man. Baking tests have demonstrated that even when flour is replaced by dry yeast to as high as twenty per cent., loaves of pleasant flavor can be made. Other experiments show that in adding yeast to meat preparations, twenty-five per cent. of the meat protein can be replaced by yeast protein without making the mixture unpalatable. It is probable that from ten to thirty per cent. of the nitrogen of an ordinary

mixed diet may be replaced by yeast nitrogen in the form of compressed yeast without detriment to the best nutritive interests of the individual.

Experiments with compressed yeast on animals indicate the value of this substance as food for the growing organism. Thirty-two white rats, divided into four groups, were fed by four different diets: meat diet, casein diet, meat and yeast diet, and casein and yeast diet. The results of this study showed that the addition of compressed yeast to a diet lacking the water-soluble vitamins caused an immediate and pronounced increase in body weight. This increase was found to be more rapid and greater when the diet contained casein than when the protein of the diet was furnished by lean meat. Compressed yeast can be heated to 105°C. without losing its growth promoting properties. These observations may prove to be of practical value to physicians.

MEDICAL NOTES.

REVIEW OF THE INFLUENZA EPIDEMIC.—It is interesting to review the epidemic of influenza in Boston as outlined in the *Monthly Bulletin* of the Health Department of Boston covering the months of October, November, and December. Probably the climax in the daily incidence of new cases was reached about the first of October; during the week ending October 5, there was a total of 1,214 deaths attributed either to influenza or to pneumonia. This total had fallen to six hundred by the third week in October, and to forty-seven by the week ending November 5. A week later, the number of cases appeared to increase, but subsided, until about the first of December influenza suddenly became more prevalent until a climax of a severe recrudescence was reached about December 31. It is significant to note that the November outbreak occurred three days after the Peace Day celebration; the December epidemic manifested itself after the Thanksgiving gatherings; and during the Christmas shopping periods, the number of cases increased rapidly.

As influenza was not made a reportable disease by the State Department of Health until October 4, after the climax of the first epidemic had been reached in Boston, it is probable that this fact, together with the demands upon

the time of physicians, may have resulted in a wider statistical discrepancy between the number of cases and deaths in Boston than in other cities which have profited by Boston's experience. During the December epidemic, however, the reporting was as prompt and complete as possible. Reported statistics show that during the year 1918, there were reported altogether 6,393 deaths from influenza and all forms of pneumonia in Boston. Of this number, 5,157 deaths occurred during the months of September, October, November, and December.

SOCIAL SERVICE DEPARTMENT OF THE MASSACHUSETTS GENERAL HOSPITAL.—The object of the Social Service Department of the Massachusetts General Hospital is to train its workers to know what the doctor wishes his patient to understand, to be able to phrase his directions in simple language, to gain the patient's confidence and encourage him, to make use of all the sanatoria, convalescent homes, vacation funds, employment and charitable agencies, and to teach good hygienic habits. The thirteenth annual report describes the work which has been accomplished during the year.

A total of 597 patients have been treated in the medical clinics for tuberculosis, debility, cardiac, thyroid, nephritis, diabetes, gynecological, and gastro-intestinal disturbances. In the surgical clinics, there have been 80 patients, in the throat clinic 11, in the genito-urinary clinic 42, in the skin clinic 42, in the nerve clinic 238. The children's clinic has cared for a total number of 409 patients, the infantile paralysis clinic 137, and the genito-urinary clinic 47. Tuberculosis has been the greatest problem with which the department has had to deal. The work in following up a total number of 3,861 syphilis patients treated at the South Medical Clinic has been of great value not only to the individuals, but also to the communities in which they live.

In addition to its service in time of peace, the Social Service Department has assumed the added responsibility of trying to adjust its patients to the living conditions made more difficult because of the war. Its workers have endeavored to assist and encourage men who discovered chronic ailments at the time of the draft, and have coöperated with the Red Cross Home Service in the care of the families of soldiers.

THE GODDARD HOSPITAL, BROCKTON.—The Goddard Hospital in Brockton is devoted chiefly to the care of surgical, obstetrical, and a limited number of medical patients. Its activities have been increased during the past year by the opening of the New Goddard Hospital in September, 1918. The new building is centrally located, yet in a quiet, pleasant section of the city. On the main floor are private offices, examining rooms, laboratory, the x-ray department, reception rooms, and library. The east side of the second floor is intended primarily for the medical department, but has been utilized in part for obstetrical and surgical cases. On the third floor is the main obstetrical department, delivery room, and nursery. The surgical department, including operating rooms, sterilizing, and recovery rooms, occupies the fourth floor. The hospital has no open wards, no room containing more than two beds, and has a present capacity of thirty-seven beds.

The annual report of the Goddard Hospital for the year 1918 indicates that this hospital, in common with others, has suffered both because of war conditions and the epidemic of influenza. During the year, 636 cases were admitted: 343 surgical, 256 obstetrical, and 37 medical, an increase of 83, or 15 per cent., over the previous year. The total death rate was 1.1 per cent.: surgical 0 per cent.; obstetrical 1.17 per cent., medical 11 per cent. The report contains records of obstetrical cases, and a summary of surgical operations.

AWARD OF DISTINGUISHED SERVICE MEDALS TO AMERICAN SURGEONS.—In a recent issue of the JOURNAL, there was noted editorially the award of the Distinguished Service Medal by General Pershing to Dr. Joel E. Goldthwait of Boston. This medal has also been awarded to five other American military surgeons, whose qualifications for its receipt have been published as follows in *Science*:

FRANCIS A. WINTER, Brigadier-General As chief surgeon of the lines of communication, American Expeditionary Forces, from June to December, 1917, he organized medical units at the base ports and in the camps in France. He established large supply depots from which medical supplies were distributed to the American Expeditionary Forces, and by keen foresight and administrative ability, made these supplies at all times available for our armies.

JOSEPH A. BLAKE, Colonel. As chief consult-

ant for the district of Paris, and commanding officer of Red Cross Hospital, No. 2, he efficiently standardized surgical procedures especially in the recent methods of treating fractures. His remarkable talent has materially reduced the suffering and loss of life among our wounded.

GEORGE W. CRILE, Colonel. By his skill, researches, and discoveries, he saved the lives of many of our wounded soldiers. His tireless efforts to devise new methods of treatment to prevent infection and surgical shock revolutionized Army surgery and met with the greatest success.

WILLIAM H. WILMER, Colonel. As surgeon in charge of medical research laboratories, air service, American Expeditionary Forces, since September, 1918, he has rendered most distinguished service. His thorough knowledge of the psychology of flying officers and the expert tests applied efficiently and intelligently under his direction have done much to decrease the number of accidents at the flying schools in France and have established standards and furnished indications which will be of inestimable value in all future work to determine the qualifications of pilots and observers. The data collected by him is an evidence of his ability, his painstaking care, and his thorough qualifications for the important work intrusted to him. The new methods, instruments, and appliances devised under his direction for testing candidates for pilots and observers have attracted the attention and been the subject of enthusiastic comment by officers of the allied services, and will be one of great importance in promoting the safety and more rapid development of aerial navigation.

THOMAS W. SALMON, Colonel. He has, by his constant tireless and conscientious work, as well as by his unusual judgment, done much to conserve manpower for active front line work. He was the first to demonstrate that war neurosis could be treated in advanced sanitary units with greater success than in base hospitals.

Obituaries.

MYRON LAWRENCE MARR, M.D.

MYRON LAWRENCE MARR, M.D., died in New York City, May 20, 1919, aged 67 years.

He was born in Alna, Maine, February 23, 1852, was a graduate of the medical department of Bowdoin in 1873, and practised in Athens Me., until 1888, when he moved to Skowhegan. In 1897 he settled in Dorchester, joined the Massachusetts Medical Society the following year, and practised until 1914, when his health failed. For several years he had spent the winters in

Florida. He is survived by his widow, who was Miss Nellie Dodds of Dorchester, by a son, Dr. Myron Whitmore Marr, now practising at his father's former home in Dorchester, and by two daughters. Dr. Marr was a member of St. John's Lodge of Masons, and while in Florida was president of the New England Association which had its headquarters at St. Petersburg.

EVERETT JONES, M. D.

In the untimely death of Dr. Everett Jones of Brookline, April 25th, there passed from active life a highly respected and distinguished physician.

A number of basic elements are essential in the make-up of the really successful physician; mere numbers of patients, or a large bank account, or even an extended reputation are not alone sufficient to stamp a man a success. A man may have any or all of these evidences of success, yet may through a selfish motive or a mercenary spirit, stultify his real professional growth and leave his work poorer because of having subtracted from rather than added to it. In such cases the accumulations have been to the man and not to the profession, and perish with his ashes.

Dr. Jones gave himself to his profession and in his giving, his profession was the richer for his living. But the generous giving of himself brought his untimely death.

He began life 51 years ago in Corinna, Maine, and graduated from Boston University in 1898. He began practice in Brookline immediately after his graduation, but a few doors from his residence where he died.

Dr. Jones was successful at once in establishing a lucrative general practice; but his desire was to enter the field of special surgery on nose and throat work. He was appointed assistant surgeon to the Massachusetts Homeopathic Hospital in 1909 and had a large clinic both in the Out Patient Department and the Hospital.

Dr. Jones was the first to introduce into Boston the LaForce method of bloodless tonsillectomy. He performed the operation first at the Massachusetts Homeopathic Hospital in the presence of an interested audience; it was some time, however, before it was generally adopted by other specialists, but is now the method quite generally employed.

Dr. Jones was an active member of the O. O. & L. Society to which he made a number of valuable contributions. He had under preparation a paper for the American Institute of Homeopathy to be read at the forthcoming meeting of that body at Asbury Park.

Dr. Jones belonged to the Massachusetts Homeopathic Medical Society, the American Medical Association, the Massachusetts Medical Society, and other similar organizations. He belonged to the Masons in Brookline, and was a member of the Tedesco Country Club in Swampscott. He had a summer home on Rockaway Avenue, Clifton, on the North Shore.

In 1900 he married Miss Elizabeth Lowe, daughter of Dr. Lewis G. Lowe, of Brookline. She died in 1908 and four years later he married Miss Janet Hartley of Brookline. He is survived by his wife, also by a son of the first marriage and a daughter of the second. He leaves also his venerable father as well as a sister, Mrs. Merton Raynes of Melrose, and a brother, Dr. Frederick E. Jones, a Brookline physician.

DEWITT G. WILCOX, M.D.

Miscellany.

MEMORIAL TO LOUIS WHITMORE GILBERT.

THE Brookline Medical Club desires to express its appreciation of the life and work of Louis Whitmore Gilbert. He served the Club most efficiently as secretary and later as president. His contributions to the discussions at the meetings were always helpful and stimulating, largely because he approached any problem with a refreshing directness, getting immediately at what was essential. No one had higher ideals in the conduct of life or in his professional duties, as those who knew him best can testify.

In his work as a practitioner he combined in a remarkable manner modern scientific methods with wholesome common sense, and added thereto a self-sacrificing devotion to his patients' interests. He was not content to limit himself to general practice but had devoted himself with success to the subject of pediatrics and was one of the staff of the Children's Department of the Massachusetts General Hospital.

With a full knowledge of the nature of his own illness, he faced for several years with wonderful calmness and cheerfulness the inevitable result. His was a courage which did not require the stimulus of war.

In the death of Dr. Gilbert many have lost a true friend and devoted physician.

RESUME OF COMMUNICABLE DISEASES FOR APRIL, 1919.

GENERAL PREVALENCE.

APRIL's total of 7,726 reported cases, including 1,009 cases of influenza, shows a marked decrease from the corresponding month of 1918, when 14,752 cases were reported; the case rate per 100,000 being 193.5 and 376.2 respectively.

The decrease is accounted for by the fact that there have been no outbreaks of any size during the month and, with the exception of measles, no disease has even approached its median endemic index for the month.

Diphtheria was reported in 532 instances, scattered over the entire State; the case rate being 13.3 per 100,000.

Measles reached the total of 1,046 cases. Fall River with 247 cases, Worcester with 182, and Lynn with 63 showed the greatest incidence.

Influenza continues to decline. There were but 1,069 cases reported for the month as compared with 2,928 for the preceding month.

Typhoid Fever was reported in 44 instances; cases being reported from all sections of the State with no outbreaks apparent. With health officers viewing and treating each case as the possible beginning of an outbreak, it appears as if our control and prevention were in a reasonably efficient state.

Lobar Pneumonia continues to be reported in decreasing numbers, only 408 cases were reported during April.

Veneral Diseases. Gonorrhea and syphilis still continue to be reported in goodly numbers, showing that all are coöperating in handling this serious condition. Gonorrhea was reported in 818 instances and syphilis in 419.

Smallpox was reported in 6 instances, 3 cases in Boston, 2 of unknown origin and 1 a direct contact with a case from the schooner *Flavilla*. Two cases were reported from Indian Orchard due to contact with a case from out of the State; one from Gloucester, on the schooner *Heapercus*, contracted by contact with a patient from the schooner *Flavilla*. No deaths have attended these cases to date.

RARE DISEASES.

Actinomyces was reported from Boston, 1.

Anterior Poliomyelitis was reported from Abington, 1; Boston, 1; Lawrence, 1; and Lowell, 1; total, 4.

Anthrax was reported from Woburn, 1.

Dog-bite requiring anti-rabic treatment was reported from Attleboro, 1; Dighton, 2; Lowell, 1; Middleboro, 1; Somerset, 1; and Worcester, 3; total, 9.

Dysentery was reported from Camp Devens, 1.

Epidemic Cerebrospinal Meningitis was reported from Beverly, 1; Boston, 13; Brockton, 1; Camp Devens, 3; Chelsea, 1; Everett, 2; Gardner, 1; Hudson, 1; Malden, 1; Newton, 1; Northboro, 1; Somerville, 2; Sudbury, 1; Watertown, 1; Worcester, 2; and Worthington, 1; total, 33.

Malaria was reported from Boston, 2; and Wayland, 1; total, 3.

Septic Sore Throat was reported from Arlington, 1; Boston, 6; Fitchburg, 1; Haverhill, 1; Lynn, 1; Medford, 2; and Newburyport, 5; total, 17.

Smallpox was reported from Boston, 3; Gloucester, 1; and Springfield, 2; total, 6.

Tetanus was reported from Braintree, 1; New Bedford, 2; and Quincy, 1; total, 4.

Trachoma was reported from Boston, 3; Cambridge, 1; Chelsea, 1; Fall River, 1; Fitchburg, 1; Lawrence, 1; Norwood, 1; and Worcester, 1; total, 10.